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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,405	08/27/2001	Kenneth Alan Pieroni	CHMP-102D	5474

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MORLAND C FISCHER
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EXAMINER

GARBER, CHARLES D

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 09/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/939,405

Applicant(s)

PIERONI ET AL.

Examiner

Charles Garber

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-28 is/are pending in the application.
- 4a) Of the above claim(s) 11-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

During a telephone conversation with Morland Fischer on 4/19/2002 a provisional election was made to without traverse to prosecute the invention of Group I, claims 19-28. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-18 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 19, 21, 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US Patent 6,327,898).

Regarding claim 19, Harris discloses a fuel system leakage detector 1 to test for the presence of leaks in the evaporative or fuel system 17 of a motor vehicle 19

including a source of gas under pressure 3 connected to the evaporative system under test by way of a gas supply line 72 interconnected therebetween so as to pressurize the evaporative system under test (see abstract and figures 1 and 2).

Harris also discloses a measurement device 6 located in the gas supply line between said source of gas under pressure and the evaporative system under test. The measurement device includes a bridge circuit 84 which provides a signal that is indicative of a leak flow rate within the evaporative system under test relative to a master orifice 134 leak flow rate. The magnitude of the signal is used by the electric circuit to determine whether the leak passes or fails (column 7 lines 20-63).

Harris does not expressly teach the failed leak is in need of repair. Examiner however takes Official Notice that it is widely known in the art of leak testing that leaks larger than a minimal or threshold size may be repaired as an advantageous alternative to disposing of the item failing a leak test and one of ordinary skill in the art would have known that repair may be a less costly alternative to disposal or replacement.

As for claim 21, Harris further discloses the source of gas under pressure is a source of nitrogen gas (column 5 lines 49-51).

As for claim 25, Harris further discloses a valve 118 located in the gas supply line between said source of gas under pressure and the bridge 84 or gas flow meter, the valve being moved to a first position at which to connect the source of gas under pressure to the bridge, and the valve being moved to a second position at which to disconnect the source of gas under pressure from the bridge (column 6 lines 36-46).

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As for claim 26, Harris discloses the evaporative system of a motor vehicle under test is the fuel vapor recovery system (see figures and column 3 lines 24-34).

Claim 27 is substantively equivalent to claim 19 as discussed above except the instant invention includes comparing the leak reading or signal magnitude or value to a predetermined value. However, the master orifice 134 of Harris is considered to be a predetermined standard for a leak in the fuel system and any significant change in the differential pressure signal (in the appropriate direction) from the pressure indicator 136 will be an indication of a leak.

Claim 28 is considered to be substantively equivalent to claims 26 and 27 as discussed above.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US Patent 6,327,898) as applied to claim 19 above and further in view of Nielsen (US Patent 2,771,769)

Harris lacks the gas flow meter is a non-regulating flow meter having a moving ball indicator, the movement of said ball indicator providing a visual reading of the flow of gas under pressure to the evaporative system under test and an indication of whether the evaporative system under test has a leak that is in need of repair.

Nielsen teaches almost any type of flow meter is suitable in a device for testing the fluid tightness of manufactured products. In the practice of the invention Nielsen further teaches "one of a type in which a small, light ball is retained in a tapered glass tube and the flow through the test line affects the vertical position of the ball within the flow meter." (column 1 lines 15, 16, 58-67)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a ball flow meter to test for a leakage as "inspection of the flow meter 30 will indicate to the operator from the position of the little ball 30' ... whether or not there is leakage" (column 3 lines 72-75). The particular position will also give an indication of the severity of the leak and the extent of the remedial action that may be required.

Though the references do not again expressly recite determining need for repair as a consequence of the indication Examiner considers this to be well known and advantageous for reasons previously given with respect to claim 19.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US Patent 6,327,898) as applied to claim 19 above and further in view of Malcosky et al. (US Patent 4,551,154).

The reference lacks a unidirectional check valve located in the gas supply line between the gas flow meter and the system under test to prevent the flow of gas in a direction away from the system under test and towards the gas flow meter.

Malcosky teaches check valve 202 between the pipeline 216 (which is a system under test) and flow meter 196. The check valve will prevent the flow of gas in a direction away from the system under test and towards the gas flow meter (see figure 2 and column 7 lines 14-17).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to locate a check valve between a system under test and a test

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flow meter in order to prevent back flow of system fluids which may be harmful and may damage or contaminate the test components or escape into the environment.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US Patent 6,327,898) as applied to claim 19 above and further in view of Davis, II (US Patent 2,698,222).

The reference lacks a gas accumulator located in the gas supply line between the source of gas under pressure and the gas flow meter, the gas accumulator having a chamber within which to dampen fluctuations and pulsations in the flow of gas under pressure from the source thereof.

Davis, II teaches surge tank 106 between a pump 54 and flow meter 111 (see figure 5 and column 10 lines 49-63).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a surge tank or accumulator between a gas source such as a pump and a flow meter in order to insure steady flow of the gases and reduce fluctuations from the gas source.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US Patent 6,327,898) as modified by Davis, II (US Patent 2,698,222) and applied to claim 23 above and further in view of Dowty (US Patent 2,251,239).

The references lack a check valve coupled to the gas accumulator by which to relieve excessive pressure in the gas supply line between the source of gas under pressure.

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Dowty teaches accumulators "ordinarily have" relief valves which are one way valves that activate generally after a predetermined pressure is reached.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a surge tank or accumulator with a relief valve because this is ordinary practice and is done to prevent overcharge and damage to the accumulator.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rogers et al. (US Patent 5,239,858), Fournier (US Patent 5,425,266) and Mieczkowski et al (US Patents 5,763,764 and 5,898,108) disclose pressure based test devices for leak testing vehicle fuel systems through the refill opening.

Cofield (US Patent 4,942,758) and Moody (US Patent 5,152,167) disclose leak test devices including gas source and flow meter for determining leak rate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Garber whose telephone number is (703) 308-6062. The examiner can normally be reached on 6:30 a.m. to 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

A handwritten signature in black ink, appearing to be 'CDJL' or similar, written in a cursive style.

cdg